CLAIMS:

1.   A method of discovering topology of a subnet fabric, comprising:

     providing a plurality of elements in a subnet fabric, said elements including switches, endnodes, and a subnet manager;

     issuing a packet from said subnet manager to a first switch connected thereto;

     reissuing a packet from said first switch to every element connected thereto;

     repeating said reissuing from every switch which receives a packet until so that all elements and all paths therebetween have received at least one packet;

     issuing a return packet from an endnode in response to a packet.

2.   The method according to claim 1, wherein said packet includes a batch request for recovering a plurality of information from each endpoint that receives said packet.

3.   The method according to claim 1, wherein node identification numbers identify nodes of said subnet fabric so that path discovery is automatic.

4.   The method according to claim 1, wherein said return packets return along the same path as originally sent unless a switch through which it passes has received an earlier packet.

5.   The method according to claim 1, wherein every element and every port therein are identified by number and a list is made in every packet of all elements and ports through which said packet passes.

1   6.   The method according to claim 1, wherein said packet contains a maximum

2   hop count and a hop pointer indicating if said maximum hop count has been reached.

1   7.   The method according to claim 1, wherein a switch receiving a packet which

2   has passed therethrough before will issue a return packet.

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4   8.   The method according to claim 1, wherein each switch receiving a packet

5   copies the incoming packet after adding the port number at which the packet is received.

1   9.   The method according to claim 8, wherein the port number through which the

2   copied packet is to be issued is added before issuing.

1   10.   A method of performing jobs on endnodes of a subnet fabric, comprising:

2   providing a plurality of elements in a subnet fabric, said elements including

3   switches, endnodes, and a subnet manager;

4   issuing a packet from said subnet manager to said endnodes through said

5   switches;

6   said packet containing a plurality of job requests in a batch request, each job

7   request performing a job on each endnode reached;

8   each endnode issuing a return signal for each job performed which returns to

9   said subnet manager.

11. The method according to claim 10, wherein said jobs are get jobs and set jobs.

1　12. The method according to claim 10, further comprising the use of a broadcast

2　mechanism with batch requests.

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4　13. A method of discovering topology of a subnet fabric, comprising:

5　　providing a plurality of elements in a subnet fabric, said elements including

6　switches, endnodes, and a subnet manager;

7　　assigning a unique identifier to each element and each port thereof in said

8　subnet fabric;

9　　determining a directed route packet using said identifiers;

10　　issuing said packet from said subnet manager to determine all paths in said

11　subnet fabric.

1　14. The method according to claim 13, wherein said packet is issued using a

2　broadcast method.

1　15. The method according to claim 14, wherein said packet is also issued using a

2　batch request.